SPREAD-SPECTRUM CODE DIVISION DESTINATION ACCESS (SS-CDDA) FOR SATELLITE COMMUNICATION SYSTEM WITH DISTRIBUTED GATEWAYS

ABSTRACT:

5   A code division multiplexing system for a link between components of a satellite communications system is disclosed where, using spread spectrum techniques, channel blocks are each spread by a pre-assigned orthogonal chip-coded waveform. The pre-assigned orthogonal chip-coded waveforms are each preferably chosen according to the origin and destination of the channel block. The channel blocks are

10   each spread over an intermediate frequency and then upconverted such that their spreading bandwidth is equal, or approximately equal, to the allocated bandwidth of the particular link through which they will be transmitted. The channel blocks are spread so they each have the same, or approximately the same, center frequency as the allocated frequency spectrum of the link. A system for de-multiplexing the channel

15   blocks in a link as received by one of the components of a satellite communications system is also disclosed, where the de-multiplexed link signals are then used to generate commands for use within the receiving component or to generate communications in another link.